AFM 1–9

AIR FORCE MANUAL

AIR DOCTRINE

THEATER AIRLIFT OPERATIONS

1 JULY 1954

DEPARTMENT OF THE AIR FORCE

AFM 1-9

AIR FORCE MANUAL

AIR DOCTRINE

THEATER AIRLIFT OPERATIONS

1 JULY 1954

DEPARTMENT OF THE AIR FORCE

AIR FORCE MANUAL
No. 1–9

DEPARTMENT OF THE AIR FORCE
WASHINGTON, *1 July 1954*

Foreword

1. *Purpose and Scope.* This Manual delineates the doctrine and principles particularly pertinent to airlift activity in theaters of operations and areas of responsibility. It describes the mission, forces, organization, command, and control of airlift operations. Fundamentals of the airlift system and its components; airborne, logistical, and aeromedical evacuation operations are included. Information is provided for air planning and for guidance of all services and agencies affected by theater airlift, and for basic instruction for students of theater airlift operations.

2. *Contents.* This Manual is directly related to AFM 1–2, United States Air Force Basic Doctrine, and AFM 1–3, Theater Air Operations. It stresses the unity of airpower and the fundamental requirement of centralized control and decentralized execution of theater airlift operations.

BY ORDER OF THE SECRETARY OF THE AIR FORCE:

N. F. TWINING
Chief of Staff, United States Air Force

OFFICIAL:

K. E. THIEBAUD
Colonel, USAF
Air Adjutant General

This Manual contains no copyright material.

DISTRIBUTION:

Zone of Interior and Overseas:	
Headquarters USAF	250
Major air commands	20
Except:	
Air University	5,000
Air Training Command	400
Continental Air Command	3,825
Each Air Force officer on active duty with the regular establishment	1
Miscellaneous:	
Chief of Naval Operations	150
Chief of Staff, U. S. Army (Wash AG Pubs Depot, Cameron, Va.)	150
Chief, Armed Forces Special Weapons Project	3

DISTRIBUTION—Continued

Miscellaneous—Continued	
Air Force Reserve Units	5
Air National Guard Units	5
MAAG's	1
Air Attaches	1
Headquarters, Civil Air Patrol	65
Senior Air Force Representatives:	
Joint Amphibious Board	5
Joint Landing Force Board	5
Joint Tactical Air Support Board	5
Joint Air Transportation Board	5
Joint Air Defense Board	5

306994°—54——1

Contents

	Paragraph	Page
Chapter 1. INTRODUCTION		
Mobility Requirements for Theater Forces	1	1
Theater Airlift	2	1
The Significance of Time and Theater Airlift Operations	3	1
2. THEATER AIRLIFT FORCES		
Mission	1	2
Priority of Tasks	2	2
Characteristics of Theater Airlift Forces	3	2
3. ORGANIZATION, COMMAND, AND CONTROL		
Assignment	1	3
Organization	2	3
Command	3	3
Control	4	3
Priorities and Allocations	5	4
4. AIRLIFT SYSTEM COMPONENTS		
The Airlift System	1	5
Essential Components	2	5
5. AIRBORNE OPERATIONS		
General	1	9
Types of Airborne Operations	2	9
Functions of the Air Force in Airborne Operations	3	9
Planning for Airborne Operations	4	10
Execution of the Airborne Operation	5	11
Training for Airborne Operations	6	11
6. LOGISTICAL AIRLIFT OPERATIONS		
Logistical Airlift	1	12
Unit Deployment	2	12
Airdrop Supply Operations	3	12
Coordination	4	12
Airlanded Supply Operations	5	13
Scheduled Airlift Operations	6	13
Nonscheduled Airlift Operations	7	13
7. AEROMEDICAL EVACUATION OPERATIONS		
Concept	1	15
Responsibility	2	15
Functions of Troop Carrier Forces in Aeromedical Evacuation	3	15
Theater Aeromedical Evacuation System	4	16
Aeromedical Evacuation Control Center	5	16
Aeromedical Evacuation Airlift Allocations	6	17
Return Airlift	7	17
Aeromedical Evacuation Priorities	8	17

Chapter 1

INTRODUCTION

1. Mobility Requirements for Theater Forces

The ability to move rapidly within a theater of operations or area of responsibility is a primary requirement of military forces. Various forms of movement provide the mobility utilized by theater military forces to enhance their firepower against the enemy, bringing their weapons to bear under the most favorable circumstances. The capacity for rapid movement provides for surprise, concentration of capabilities, and economy of effort since forces may be applied to a variety of tasks by rapid redeployment. The utility and flexibility of theater forces may be related directly to their tactical mobility. The mobility of theater forces is increased by judicious use of the three basic media of land, water, and air transport capabilities.

2. Theater Airlift

a. The airlift responsibility of the theater air commander is discharged by troop carrier forces which are directly assigned to him. Troop carrier airlift capability may be augmented by other airlift capability assigned to the theater commander. When theater airlift augmentation does occur, it is placed under the control of the theater air commander.

b. The characteristics of airlift forces make them particularly suitable for meeting theater mobility needs when time is limited and distance or accessibility considerations make surface transportation impracticable. Airlift may be the only feasible means for deploying forces into strategic or critical areas and for subsequently sustaining their logistical needs. However, with the exception of aeromedical evacuation, airlift should not be considered a substitute for surface transportation. Land, water, and air transportation systems are mutually complementary in capabilities and limitations and each should be employed to exploit fully its special characteristics.

c. The theater airlift mission encompasses the airlift needs of all services comprising the theater forces. Therefore, airlift forces are employed for the attainment of the overall theater objective rather than the objective of any theater service or component. As in all theater air operations, maximum advantage of airlift capabilities is realized by employing the basic principles of centralized control and decentralized execution.

3. The Significance of Time and Theater Airlift Operations

a. Technological advances and munitions capable of mass destruction have reduced the time required to reach a decision in war, and historic military patterns have undergone revolutionary change. The ability to reduce time factors has a direct bearing on the ability of friendly forces to respond to enemy actions and to seize the initiative quickly. Thus the increased importance of time in military operations has correspondingly increased the significance of troop carrier forces engaged in theater airlift operations.

b. Troop carrier forces, by providing airlift in theaters of operations, increase the versatility, mobility, and flexibility of deployed theater forces. Also, airlift reduces intransit time, the necessity for stockpiling, and shortages of critical logistics, all of which materially aid in the accomplishment of the theater mission.

c. Aeromedical evacuation reduces mortality rates significantly and enhances the force effectiveness by returning casualties to duty or by rapidly evacuating them to rear areas.

d. Airborne capability provides a higher degree of utility to ground forces than has ever been known before and enables them to pose a threat which the enemy must counter at high cost in deployed security forces.

e. Special airlift operations conducted by troop carrier forces increase the effectiveness of the entire theater force and impart capabilities which otherwise would not exist.

Chapter 2

THEATER AIRLIFT FORCES

1. Mission

Troop carrier air forces primarily are organized, equipped, and trained to provide intratheater airlift operations; however, they are capable of intertheater operations also. The airlift mission encompasses these basic tasks:

a. *Logistical airlift operations:*
   (1) Unit deployment.
   (2) Airdrop supply operations.
   (3) Airlanded supply operations.
   (4) Scheduled airlift operations.
   (5) Nonscheduled airlift operations.
b. Aeromedical evacuation.
c. Airborne operations.
d. Special airlift operations.

2. Priority of Tasks

No one task is considered to have an overall priority. Priorities will shift from time to time as the theater situation changes. Therefore, airlift forces must maintain their versatility and ability to accomplish any task or combination of tasks within the purview of their mission, and for the rapid shifting of effort from one to another of these tasks.

3. Characteristics of Theater Airlift Forces

a. Theater airlift forces possess the same general characteristics as other air forces. However, the aircraft types assigned to troop carrier forces allow them to operate under conditions of terrain which would not be feasible for other combat air forces. Rotary-wing aircraft, assault-type aircraft, and programmed aircraft incorporating new aircraft developments will give airlift forces increased flexibility and mobility over what they now possess. The ability to operate from unprepared strips, snow, or from ice permits maximum exploitation of inherent air force characteristics, and enhances the capacity of friendly forces to capitalize on enemy weaknesses and tactical errors.

b. When airlift requirements saturate the capability of intertheater airlift forces, troop carrier forces may be employed until the situation is alleviated. In the redeployment of forces, particularly combat air forces, from one theater to another, troop carrier forces are utilized to expedite the movement. Airlift places the airlifted forces in a position from which they may initiate or resume operations against the enemy with a minimum loss of effort and time. Thus, the ability of troop carrier forces to perform both intertheater and intratheater airlift tasks increases the strategic and tactical mobility of theater forces; of air forces in particular.

c. Extremely high vulnerability to enemy air and ground fire is characteristic of troop carrier forces. Airlift forces, in optimizing load-carrying ability, forego organic self-defense capacity. Because of this, their operations must be carefully planned to minimize this vulnerability by providing passive and active defense.

d. Concentration of airlift forces in forward areas in proximity to the combat zone would present a lucrative target for enemy air attack unless a very high degree of friendly control of the air was assured. In the lifting of airborne forces, a high concentration is required at departure bases, en route, and in the objective area. During these operations troop carrier forces are extremely vulnerable and the most vigorous active and passive defense measures must be pursued. For airborne operations, a high degree of control of the air is required.

Chapter 3

ORGANIZATION, COMMAND, AND CONTROL

1. Assignment

Troop carrier and other airlift forces assigned to a theater are reassigned by the theater commander to his theater air commander for integration into the theater airlift capability.

2. Organization

a. The size of theater airlift forces is determined by theater needs for discharging airlift tasks enumerated previously. The magnitude of these tasks and the size of the theater area of responsibility determines force employment. Regardless of command assignment level, operational procedures, or force employment, the internal organizational structure of the airlift force remains essentially the same. The inherent flexibility of air force organization adjusts rapidly and easily to changing strategic or tactical needs of the theater. This organizational flexibility eliminates the necessity for forming joint or task force organizations for accomplishing limited theater objectives within the overall theater mission.

b. The theater air commander establishes a troop carrier command, usually designated as a numbered Air Force. Normally, assigned to this organization are heavy, medium, and assault troop carrier units; a unit for providing communications between command headquarters and its operating agencies; aerial port operations unit(s); combat control teams; and aeromedical evacuation units. Each of these types of units is integrated into the troop carrier organization (and command) structure.

c. A troop carrier air force may be composed of two or more troop carrier air divisions, depending upon the needs of the theater, its geographical size, the capabilities of the airlift communications system, and the range of assigned aircraft.

3. Command

a. Troop carrier and other airlift forces assigned to a theater are maintained as organizational and operational entities. They are not parceled out to various components to accomplish airlift requirements generated by these individual components. As entities, airlift forces accomplish the airlift needs of all theater components in accordance with priorities established by proper theater authority. Economy of effort, conservation of force, and unity of purpose is achieved by virtue of the responsibility and authority vested in the theater air commander for the conduct of airlift operations.

b. Troop carrier forces are placed under the command and control of the theater air commander. He is responsible for overall planning and employment of these forces, for discharging the theater airlift task, and for success or failure of the airlift mission. This places the overall organization, command, and control of theater airlift capability at a level of responsibility not affected by geographical subdivisions of the theater area.

c. The theater air commander usually delegates authority to the troop carrier commander for direct communication with other services and component commanders on airlift matters. Overall plans for execution by subordinate airlift forces are prepared at the troop carrier command level.

d. Areas of responsibility are assigned by the troop carrier commander to troop carrier air forces and their subordinate commands. The air forces execute the operational plans of higher headquarters and control directly the movement of all troop carrier aircraft within their areas of responsibility.

4. Control

Unity of action and singleness of purpose is achieved by centralization of control and decentralization of execution. This permits a concentration of capabilities from over a wide area on a single objective, or the attainment of multiple objectives from a concentrated area or force. The only limitation to this form of control is the size

306994°—54——2

of the area which can be serviced practically by the airlift force. The size is governed by the range of assigned aircraft and the practical limitations of the force communications facilities. When the area over-extends the range of assigned aircraft or the capabilities of the communications facilities, two or more airlift forces may be assigned the theater. In this instance, the relationship of each force to its area will be identical to the relationship a single force would have to a single area. Communications, coordination, and control between such forces is effected at the troop carrier command level, to insure proper coordination, inflight briefing, and control of aircraft.

5. Priorities and Allocations

a. Troop carrier airlift is utilized by all theater activities. Allocation of airlift capability to the major components within the theater is the responsibility of the theater commander.

b. The theater commander usually establishes a Theater Transportation and Allocation Board composed of representatives from the three major components; it is a permanent, full-time working agency. It translates the directives of the theater commander into terms of priority tasks for execution by the airlift forces. Subsequent to the establishment of airlift task precedence, the Theater Transportation and Allocations Board allocates shares of transportation capability to the major components. Within this allocation the components are free to determine their individual priorities for the traffic of their services.

c. Under the Theater Transportation Allocations Board, and a part thereof, is the Theater Air Transportation Board (similar boards exist for ground and sea transportation). This agency is responsible for translating the general policies of the Theater Transportation and Allocations Board into specific requirements. From this agency, specific airlift tonnages are allocated to the theater components, broken down into individual service requirements.

d. Major components submit airlift needs at specified intervals to the Theater Air Transportation Board. Concurrently, the troop carrier commander determines and submits his airlift capability estimate. Needs are adjusted to airlift capability. When airlift needs exceed airlift capabilities, the decision concerning allocation or augmentation is made by the theater commander.

Chapter 4

AIRLIFT SYSTEM COMPONENTS

1. The Airlift System

The theater airlift system is a term applied to those aircraft, facilities, units, personnel, capabilities, organizations, and support elements necessary to the accomplishment of the theater airlift tasks. Attainment of theater objectives may be highly dependent upon the smooth operation and coordinated functioning of this system. Basic elements of the system are aircraft, airfields, skilled personnel, and communications. Corollary attributes are flexibility, adaptability, dependability, unity, command, and control.

2. Essential Components

a. *Aircraft.* Cargo aircraft are the basic tools of the airlift system. The speed, range, and load-carrying characteristics of troop carrier aircraft impart great versatility to the airlift system. The organizational concept, backed by multipurpose cargo aircraft, gives the system great mobility and flexibility. These salient factors must not be compromised nor maximum exploitation vitiated by organizational or command limitations or by overspecialization of aircraft to a particular task. The capabilities of various types of cargo aircraft organic to troop carrier forces pose strategic and tactical threats to the enemy. Also, these capabilities permit employment of the cargo aircraft under a wide variety of conditions and circumstances and makes unnecessary, requirements for highly specialized troop carrier aircraft characteristics. Aircraft types organic to troop carrier forces make these forces highly mobile and facilitate the rapid transfer of airlift activities as required with minimum loss in time and effectiveness.

b. *Airfields.* Airfields and air base facilities for airlift operations must be consistent with the task to be accomplished, the magnitude of the forces employed, and the time limitations imposed for accomplishment of the mission. Bases should provide for adequate runways, taxiways, parking ramps, dispersal, refueling, servicing, maintenance, and repair; facilities for permanent and transient personnel; and adequate storage and handling equipment for materiel, and for necessary expansion as required.

An important factor in aircraft utilization is the number and quality of airfields and their facilities. Airfields must be planned and provided in accordance with the strategic and tactical needs of the theater forces. Therefore, airlift-airfield planning must be in consonance and concurrent with other logistical and operational planning. Parachute and helicopter delivery may complement airlanded delivery. However, ability to land, onload and offload, and adequately service large transport type of aircraft provides the greatest sustained airlift capability.

Whenever possible, airfields should be constructed in both forward and rear areas for airlift operations exclusively. This provides for a common distribution point for combat logistics for all services, decreases air traffic on airfields supporting fighter and bomber combat operations, and increases effectiveness by concentrating on a particular type of airpower operation. Basic considerations for selection and development of airlift airfields are—

(1) Proper location adjacent to agencies generating airlift requirements, good terrain for airfield construction, and good meteorological weather conditions.

(2) Rapid access and linkup facilities between supply points, ports, units, and existing facilities.

(3) Actual and potential facilities, capabilities, and limitations—including housing, communications, and water supply.

(4) Flexibility of site for the accommodation of runways, ramps, taxiways, buildings, materiel handling, and expansion of facilities as needed.

c. *Aerial Port Operations.* The value of the theater airlift system to the theater is measured in terms of human life, time, and effort saved compared to other modes of transportation. Effort is

made to reduce to the minimum the time that logistics remain in the airlift system. Thus, the effectiveness of terminal procedures and facilities have a material bearing on aircraft utilization and turnaround time. Turnaround time largely is dependent upon the time required to onload and offload logistics; efficient turnaround enhances airlift operations in inverse proportion to the time consumed. The aerial port performs two main functions: it increases airlift capability by reducing aircraft ground and turnaround time, and it reduces the intransit time of critical items to the user.

Selection, preparation, and operation of aerial ports is an Air Force responsibility. In a theater of operations, this function is performed by aerial port operations squadrons. The function of aerial port operations is an integral part of troop carrier operations, therefore aerial port operations squadrons are under the command and control of the troop carrier commander. When aerial port operations squadrons or detachments are located on bases not under troop carrier jurisdiction, they acquire tenant organization status at their assigned locations but do not pass from command and control of the troop carrier commander. Aerial port operations squadrons will—

(1) Operate air terminals or aerial port facilities where personnel and materiel are assembled for airlift; documentation and transient facilities; or storage facilities for personnel or materiel for which airlift has been allocated.

(2) Move cargo from air terminals or aerial ports to aircraft onloading and from aircraft offloading to intransit points.

(3) Schedule, receive, inspect, and store materiel to be airlifted and delivered by airlanding, freedrop, or paradrop method.

(4) Furnish and operate materials-handling equipment, which normally is not organic to the unit being moved, furnish technical assistance to and direct supervision over units engaged in onloading or offloading airlifted personnel and materiel.

(5) Prepare load plans, load, and secure cargo in aircraft: eject cargo for inflight delivery, and offload materiel in airlanded operations not involving unit movements.

(6) Provide personnel and materiel for ground control of aircraft in airhead areas as directed by higher authority.

(7) Provide personnel, materiel, and facilities to assist aeromedical evacuation as directed by higher authority.

(8) Prepare Air Force materiel for airlanded, free drop, or paradrop delivery.

The magnitude of the airlift and aerial port operation at a given time and location determines the size of the air terminal establishment. Aerial port operations squadrons have a flexible organization which provides cellular units or detachments for manning air terminals according to their needs. Specialized units from the sister services may be located at air terminals operated by the Air Force. These tenant-status units are concerned primarily with monitoring logistics of their services and have no responsibility for air terminal management although they may augment aerial port operations squadron capability.

d. *Communications.* As in all military operations, the effective and efficient operation of the entire airlift system is dependent upon the functioning of its communications which permits timely transmission of aircraft loading, movement, arrivals, departures, and centralized direction and coordination of the entire airlift force. These communications must be rapid, dependable, and capable of peak traffic demands on a 24-hour basis, and must be immediately available to the airlift commander. The wide dispersal of facilities and varying conditions of operations from forward combat zones to rearmost areas require several types of communications facilities. Coordination with combat forces in forward areas requires mobile equipment, while long range transmission requires less mobile high capacity equipment. Telephone, teletype, point-to-point, air-to-ground, and air-to-air communications facilities, separately or in combination, are required to maintain control of the airlift system. Additionally, communications links with services and areas provided airlift is necessary for planning and coordination purposes.

Air route electronics and navigational and landing aids with high volume capabilities are necessary to process large numbers of aircraft of different types, operating under all conditions of weather, and at minimum inflight intervals. Such facilities are provided in whole or in part by the theater air commander. Where such facilities are lacking, provision must be made for their early and rapid establishment.

The nature of the communications traffic generates security requirements. These security measures should prevent the enemy from gaining intelligence but not hamper airlift operations. The troop carrier commander is assigned a communications squadron(s) for discharging his communications needs. This unit provides the means for integrating airlift headquarters, the transport movement control center, troop carrier units, air terminals, and aerial port communications nets. Direct landline communications between the transport movement control center and operational troop carrier units facilitate and expedite airlift operations.

e. *Control:*

(1) The control facility is the brain of the airlift system, the focal point for communications, and the source of command-direction for the airlift force. The purpose of the control facility is to present to the airlift commander that information which will give him a clear picture of his operations and provide a means for controlling his organization. Also, it provides essential information to his staff and to the component representatives (ALCO's) to permit their functioning with maximum effectiveness and efficiency.

(2) The control facility is a procedure rather than a thing or place and it is centralized in troop carrier headquarters. It consists of—

(a) Coordinating airlift matters with user representatives.

(b) Receiving airlift needs and developing means and procedures for maximum utilization of the airlift capability for fulfilling these requirements.

(c) Directing and monitoring airlift progress.

(d) Operating a transport movement control agency which accurately and expeditiously controls the overall airlift and depicts its status.

(3) By means of the airlift control facility the airlift commander, his staff, and user representatives follow theater airlift progress closely. This information is employed to advise component commanders and their logisticians rapidly and accurately on the status of their intransit personnel and materiel. To accomplish this, the control facility must present the following information accurately and rapidly:

(a) Airlift routes status and airlift pattern.
(b) Traffic flow.
(c) Type of logistics being airlifted.
(d) Aircraft location and status.
(e) Airfield and air terminal status.
(f) Aeromedical evacuation status.
(g) Communications status.
(h) Weather and meteorological data.
(i) Enemy air status.

Reduction of these factors, modified by aircraft utilization rates, is converted to airlift tonnage capability. This represents the airlift ton-mile potential, under conditions stated, over given air routes. The theater air commander may modify this capability on the basis of more complete knowledge of enemy air activity. The final estimate of airlift capability is given to the theater commander who then allots, through his airlift allocation agency, the percentages of airlift potential to the components under his command.

(4) Each component is represented by an airlift liaison coordination officer (ALCO) at the control center facility. The component ALCO's are responsible for coordinating their respective component airlift requirements through the transport movement control for action by the operating agencies of the airlift system. The transport movement control is a part of the airlift commander's operations staff; it receives requests from ALCO's and initiates the necessary airlift operations. ALCO's are responsible for the delivery and removal of the logistics of their services at the specified air points to minimize surface intransit time. Arrangements by ALCO's should be finalized 24 hours in advance of actual operations.

(5) Daily airlift requests are consolidated, operational plans integrated, and coordination completed prior to departure of planned airlift. Planned arrivals and departures eliminate saturation workloads, permit normal 24-hour operations, assure more effective and efficient handling of emergency requests, and expedite the entire theater airlift operation.

f. *Airlanded Supply Request System Control.* To summarize: Usually, there are four general areas or parts to the airlift request system:

(1) Headquarters of the troop carrier commander, which prepares the forecast troop carrier capability. This periodic forecast may be made as frequently as required.

(2) The Theater Air Transportation Board, which receives the ton-mile capability forecast and allocates this capability in accordance with the theater commander's wishes.

(3) User representatives who are called airlift liaison coordination officers. ALCO's are located at theater air command or troop carrier headquarters. Generally, better coordination and communication is effected when ALCO's are located at troop carrier headquarters.

(4) The transportation movement control center, which schedules airlift flights for the entire airlift system.

g. *Aeromedical Evacuation Control.* Aeromedical evacuation control facilities will be established at airlift headquarters for necessary coordination. This subject is described in chapter 7. However, the troop carrier commander commands, controls, and operates the medical facilities for the processing, holding, and intransit treatment of patients.

h. *Trained Personnel.* Troop carrier forces train to develop and maintain a standard of individual and unit proficiency which will enable them to accomplish the theater airlift mission. Troop carrier operations are intricate and to be accomplished successfully, require highly skilled air and ground crew personnel closely knit into well organized teams. Normally, air and ground crews arrive in the theater with varying degrees of proficiency and experience. Therefore, the troop carrier commander must reserve sufficient flying hours from his total capability for necessary individual and unit training.

Chapter 5

AIRBORNE OPERATION

1. General

Concentration of capabilities and economy of effort are two essentials to victory in modern conflict. Both are achieved when the various parts of a specific operation are integrated under the highest commander and directed toward a primary objective. The theater commander is responsible for insuring that prior to embarking on a large scale airborne operation all pertinent factors have been evaluated and the recommendations of his component commanders have been carefully considered. Having determined to conduct the airborne operation, the theater commander exercises his authority through normal command channels by means of directives to his component commanders. These directives apportion the tasks among the components and establish the basis for detailed planning and coordination of the airborne operation.

A major airborne operation can be a relatively simple task if proper coordination is exercised between the participating agencies. Weather and enemy capabilities can be complicating factors. An airborne operation will result in temporarily reduced airlift available for other theater activities. In any event it is not an isolated theater operation and must be considered in relation to the overall theater capabilities and objectives.

2. Types of Airborne Operations

There is no distinct separation between the various types of airborne operations. All airborne operations are essentially the same; varying mainly in degree, time, and objective. They generally are categorized as:

a. *Early Linkup.* This concerns the delivery of airborne units into combat areas to the rear or flanks of enemy ground positions. After initial objectives are attained, the committed airborne forces plan to effect an early surface linkup with friendly ground forces.

b. *Independent.* Independent airborne operations involve seizure of an airhead in hostile territory from which further air or ground operations may be conducted. Airborne forces involved will be independent of surface lines of communications for an extended period of time and will require resupply by air.

c. *Raid.* A raid entails delivery of airborne units into hostile territory to destroy, neutralize, or capture, or to effect a particular mission. Upon completion of the mission a planned withdrawal is executed by air or other means.

d. *Special.* The special category of airborne actions encompasses those not categorized previously as early linkup, independent, or raid type of operations. Special airborne operations usually are show-of-force, aid to partisan or guerrilla forces, or psychological-politico type actions. Evacuation or recovery of these forces depends on the type of activity involved and facilities available for recovery.

3. Functions of the Air Force in Airborne Operations

Although troop carrier type air forces are responsible for airborne airlift, many types of air forces usually are involved directly or indirectly in airborne operations. The need for meticulous coordination of detail among all forces involved is continuous, especially because the types of forces, other than troop carrier forces, will vary for each separate operation.

a. *Troop Carrier Air Forces.* Troop carrier air forces are combat type forces; they participate in offensive action against the enemy during an airborne operation. Also, troop carrier forces are responsible for—

(1) Locating drop zone (DZ) or landing zones (LZ).

(2) Maneuvering their forces to the drop or landing zone. This responsibility includes selection of approach, and air speed to minimize enemy

flack, fighter opposition, and air traffic congestion.

(3) Precise delivery of airborne units by paradrop, assault landing, or combination of these means and precise delivery of materiel by freedrop, paradrop, assault landing, or combination thereof.

(4) Delivery of sustaining or reinforcement forces with their weapons, heavy equipment and materiel.

(5) Air evacuation of troops and materiel, to include casualties and prisoners of war.

(6) The provision of combat control teams.

b. *Combat Control Teams.* The specific responsibilities of combat control teams are—

(1) To establish ground-to-air communications and navigation aids in the drop or landing zone and to assist incoming troop carrier aircraft in accurate delivery of their cargo.

(2) Relay information and advise incoming aircraft crews on conditions to be encountered in the drop or landing zone which may be pertinent to the operation.

(3) Assist aircraft in lead echelons to land, park, and to take such other action as may be required.

(4) Prepare designated areas for the efficient and effective Air Force evacuation of casualties so as to not interfere with combat operations.

c. *Other Air Considerations.* In addition to the troop carrier forces' effort, other air force tasks in conjunction with the airborne operations must be carefully coordinated. Before the airborne operation is seriously considered, friendly air forces must have or be able to acquire an exceptionally high degree of control of the air; interdiction operations must be feasible, close air support capability must be adequate, and sufficient air reconnaissance forces must be available.

(1) *Counter Air.* Counter air operations include air defense of the marshaling area, effective screening of inflight troop carrier forces, and a very high degree of control of the air, especially in the immediate objective and surrounding area.

(2) *Interdiction.* Interdiction of enemy forces and materiel is essential to the success of an airborne operation. Every effort must be made to destroy or delay enemy personnel and materiel enroute to the objective area before, during, and after the area has been made secure.

(3) *Close Air Support.* Since airborne forces normally are limited in organic firepower, they will require close air support in proportion to the enemy surface opposition encountered.

(4) *Air Reconnaissance.* Extensive photo, visual, and electronic air reconnaissance of the objective area is vital to success of an airborne operation. Reconnaissance coverage prior to, during, and subsequent to the airborne operation is mandatory.

4. Planning for Airborne Operations

Planning and execution of an airborne operation is accomplished through normal theater command channels and organizational structures. No special command or organizational arrangements are required. Absence of special command and organizational structures for airborne operations does not preclude one force from becoming intimately familiar with the plans of the other forces involved. Familiarity with, and knowledge of, the plans of the forces involved in the operation is accomplished by continuous coordination among those forces. Coordination minimizes inherent risks and provides maximum latitude to the separate forces for exploiting their own unique capabilities. The theater commander assigns specific coordination responsibilities to the various forces in his orders for the operation. Commanders usually effect coordination by the exchange of appropriate liaison officers. Planning for the airborne operation depends upon the commanders and the magnitude of operations and is performed at various levels essentially as follows:

a. *Theater Level.* The theater commander gives the component force commanders broad guidance in the normal form of theater-type directives. These directives apportion tasks among the components and establish the basis for more detailed plans and coordination among them concerning the airborne operation.

b. *Theater Air Force-Army Level.* Upon receipt of the theater directive, the air and ground component commanders enlarge on their respective directives to their subordinate commanders for further planning and compliance. In the case of the air component, the theater air commander's plans and directives are passed to the troop carrier commander and to other air commanders as appropriate.

c. *Troop Carrier—Airborne Level.* Upon receipt of his order, the troop carrier commander undertakes an initial study of the operation; the airborne force commander accomplishes a similar study. The commanders and their respective staffs confer at the earliest practicable date. From this time forward, until the operation is either abandoned or completed, conferences and coordination between the two is continuous. Standing operating procedures (SOP's) for this purpose are followed as closely as possible. SOP's and supplementing directives are prepared unilaterally for the separate forces and in unison when the action is pertinent to or binding on all forces. In any event complete coordination is absolutely essential.

d. *Unit Level.* Each troop carrier unit will conduct continuous liaison, conferences, and coordination with the airborne force unit which it will airlift to the objective area. Even minute details must be coordinated and firmed prior to the operation.

5. Execution of the Airborne Operation

Execution of the airborne operation is the application of the plans, tactics, and techniques previously agreed upon by the troop carrier and the ground force commanders. Each is responsible for discharging his individual functions. There are few stereotype airborne operations; much depends on the cooperation and selflessness of the commanders and their staffs. However, there are certain principles which have proved effective, such as:

a. *Surprise.* Surprise is one of the most important criteria for success in an airborne operation. Surprise and aggressive tactics frequently compensate for numerical superiority enjoyed by the enemy. Secrecy in planning judicious but thorough application of air reconnaissance capabilities, an appropriate cover plan, absolute cooperation and coordination, proper application of airpower capabilities in counter air, interdiction, and close support, plus positive and speedy execution of the operation itself, will add materially to the probability of success.

b. *Mass.* Mass has always been recognized as a prime principle of military operations. Ordinarily, the principle of mass connotes concentration of forces in time and space. In airborne operations, such mass may offer unusual opportunity to the enemy for the application of munitions of mass destruction. Yet, concentration in some form is essential to the success of the airborne operation. Therefore, it must be remembered that too great a dispersal of the airborne forces to avoid consequence of attack by enemy area munitions will make counter air, interdiction, and close air support operations very difficult and possibly, ineffective, while an overconcentration of airborne forces will make adequate dispersal and deployment of those forces difficult. The air and ground commanders must base their decisions upon intimate knowledge of the problems confronting one another and what is best for the overall operation.

c. *Simplicity.* Both the air and the ground commander will be confronted with complexities which they must solve individually. Therefore, it is to the mutual benefit of all concerned to simplify the operation. One means of accomplishing this is by adequate training and rehearsal prior to the operation.

6. Training for Airborne Operations

Individual, staff, and unit training is the responsibility of the service commanders. Periodic exercises, depending upon time and force availability, will enhance and simplify troop carrier and airborne operations in combat.

a. *Unit Staff Training.* Staffs must be trained both unilaterally and in unison, concerning details of airlift and airborne operations; especially toward attaining proficiency in planning, and of equal importance, gaining and retaining knowledge of the organization, tactics, techniques, and logistics of both air and ground forces. When exercises and maneuvers are undertaken, they should be made as realistic as possible and the forces exercised under conditions normally encountered in actual combat.

b. *Preoperational Rehearsal.* Small airborne operations, routine airlift, and aeromedical evacuation may not require rehearsal; depending upon the training and experience of the individuals and units involved. For large or intricate airborne or airlift operations it may be necessary to augment normal training with partial or full rehearsal of the operation as planned. This type of activity is time-consuming and may compromise security, therefore, when undertaken, all details should be firmed and maximum benefits derived from the operation.

Chapter 6

LOGISTICAL AIRLIFT OPERATIONS

1. Logistical Airlift

Logistical airlift operations are the movement by air of combat units, materiel, and personnel of any component into areas already held by friendly forces or into sterile areas within a theater of operations. It includes airdrop and airlanded supply operations; both scheduled and nonscheduled. Airborne, aeromedical, and special airlift operations also are included in this category. However, because of differing requirements generated and the detailed planning necessary, and because these latter have request and control systems which differ considerably from normal logistical airlift operations, airborne, aeromedical, and special airlift operations are treated separately.

2. Unit Deployment

a. The movement of entire units by air becomes particularly advantageous under theater of operation conditions which must be cognizant of rapidly changing tactical situations. When units are air transportable they become more mobile, and even though not committed to action, they constitute a threat to the enemy because they can be redeployed quickly and at will. These airlift operations provide theater forces with a capability which enhances their normal combat potential. Also, unit airlift reduces the noneffective time and delay usually accompanying unit redeployment. The theater air commander's responsibility for assisting units in the preparation of realistic, practical movement and mobility plans is delegated to the troop carrier commander.

b. Unit deployment entails considerable advance planning by both airlift forces and the unit being airlifted. Arrangements must be made for the grouping of personnel and materiel and other impediments into adequate aircraft loads and for the orderly movement to and from unit areas and onloading and offloading of transport aircraft. Plans indicating aircraft loading and sequence of movement must be developed in unison by the troop carrier commander and the commander of the unit being airlifted. In preparing the sequence of onloading, offloading, and other details, consideration must be given to reducing as much as possible the time period during which the unit being moved will be nonoperational.

c. The troop carrier command may find it advantageous to form unit movement control teams within his aerial port operations resources. These teams are dispatched to the old and new sites of the unit being moved to provide planning and technical assistance and supervision during the airlift operation.

3. Airdrop Supply Operations

Operations in which the materiel is airlifted and delivered by paradrop or free drop are designated airdrop may increase because of devastation for the purpose of airdropping supplies and materiel to sustain air and surface forces in locations where surface lines of communications are unable to provide the logistics required. During the advance of friendly forces the requirement for airdrop may increase because of devastation wrought by prior air attacks on then enemy-held roads and bridges. In withdrawal actions, small units may become separated from their parent units by enemy action and surrounded by enemy forces. Airdrop supply may be their only means of obtaining ammunition, POL, and sustenance until a reunion with friendly forces can be effected. Supply may be accomplished by airdrop, provided that supplies are not subject to excessive damage by this means.

4. Coordination

a. Airdrop supply operations require a high degree of coordination between troop carrier command, forces receiving supplies, and other air forces. Selection of adequate drop zones, appropriate markings, control of artillery, liaison in the joint operations center (JOC), and similar matters require a high degree of experience and coordination. The troop carrier commander will maintain a troop carrier liaison officer in the JOC who will effect a large part of this coordination.

b. In the event of preplanned airdrop supply operations, as occurs when airdrop is employed to supplement inadequate surface lines of communications, necessary coordination can be effected well in advance of operations. However, in some instances of unanticipated reverses or when unexpected success permits a rapid advance, prior planning time may have to be reduced in the interests of expediency.

c. Wide distribution of SOP's to all forces is one means of reducing elapsed time between requests for emergency airdrop and actual delivery of supplies. The troop carrier commander will cause to be published such SOP's, including information concerning the characteristics of adequate drop zones, terrain considerations for aircraft approaches, and departures to drop zones, drop zone markings, and so forth.

d. The most rapid means of communications available must be employed for requesting and the laying on of emergency airdrop supply operations. Standard items of sustenance, ammunition, and fuel will be prepackaged, palletized, and stored on troop carrier air fields as a further means of reducing elapsed time between request and delivery to units.

5. Airlanded Supply Operations

Airlanded supply is that form of personnel and cargo operations in which the aircraft lands and is offloaded. In airlanded operations, suitable forward landing areas are located in proximity to main lines of communications. Landing areas may be prepared well in advance for sustained operations or may be hastily prepared open areas for operations of limited duration. When facilities are less than required, the airlanded operation will be limited to a similar degree.

6. Scheduled Airlift Operations

Scheduled airlift operations are conducted to provide friendly forces occupying friendly areas a scheduled airlift operation in a theater. This airlift task is similar to domestic airline operations in that it is designed to provide rapid, dependable, and adequate airlift of personnel, small items of cargo, official and unofficial mail. This service is available to all theater agencies equally, in accordance with priorities established by the theater commander. In normal theater operations, during peace and war, there are requirements for passenger and cargo operations of a continuing nature or of a periodic repetitive nature. To meet these requirements, airlift operations can be programmed on a scheduled basis over considerable periods of time. When programmed in this manner, the airlift is considered to be scheduled airlift operations. Many advantages accrue when airlift flights are conducted on a scheduled basis. Foremost among these advantages are recurrent, rapid, reliable, and dependable airlift service to principal operational areas in a theater. A second advantage is that the operation of a fixed number of aircraft over specific routes each day in accordance with an established schedule eliminates the necessity for programming for many of the nonscheduled airlift requests. Relieved of routine planning, the transport movement control center is free to concentrate upon true emergency operations and is given the necessary time for programming airlift requests which cannot be met by scheduled flights.

7. Nonscheduled Airlift Operations

a. *Purpose.* Nonscheduled airlift operations provide timely airlift that cannot be obtained through scheduled airlift or surface means of communications; this may be the task to which the major portion of the airlanded supply operation will be devoted.

b. *Procedure.* Requests for airlift of individual items are funneled by the major components to their representatives, the ALCOs; given airlift release numbers and priority for identification purposes; and passed to the transport movement control center. Here, individual airlift requests are consolidated into aircraft loads; every effort is made to utilize fully all available capacity on each aircraft. Every individual aircraft load is planned along with complete flight itineraries, departure and arrival times for each station. These daily operation orders are sent by the transport movement control center to the troop carrier unit which is to furnish the airlift. Additionally, these daily operation orders are distributed over the troop carrier command communication facilities to units and bases at which aerial port operations are established. The ALCO's insure the availability of the requested airlift items at the applicable aerial port facilities in time for loading in accordance with projected departure times as contained in the daily operation orders.

c. *Aeromedical Evacuation.* This subject is covered in greater detail in chapter 7; however, aeromedical evacuation is provided for the air evacuation of the casualties of all forces. Although specific airlift may be provided for this task, maximum utilization is made of outbound airlift generated by inbound delivery of combat logistics to theater forces.

d. *Special Air Missions.* Special air missions are operations to perform special tasks which cannot be accomplished by scheduled flights and which are not included in categories previously discussed. Many of these tasks are security classified and are treated in other publications. Special air missions must be planned and executed with the highest degree of care and reliability.

Chapter 7

AEROMEDICAL EVACUATION OPERATIONS

1. Concept

Traditionally, the military value of medical capability lies in the maintenance of mentally and physically effective combat manpower. Combat experience clearly demonstrates that aeromedical evacuation considerably reduces time lost from duty and mortality by rapidly transferring the sick and wounded over difficult terrain and long distances to well equipped and well staffed hospitals where early definitive medical treatment can be applied. The morale of fighting men is raised by the knowledge of the accessibility through aeromedical evacuation of competent lifesaving resources of modern medicine.

Appropriate planning, which emphasizes the employment of aeromedical evacuation, reduces the requirement for hospitals in the combat zone, and for the operation of ambulance trains and hospital ships in oversea theaters. This saves personnel in scarce categories, eliminates duplicate expense and overhead, and provides the great majority of patients with a less painful and accelerated means of transportation. In order to capitalize on the nation's aeromedical evacuation capability and to realize the foregoing advantages, the Department of Defense has established the policy that in both peace and war the transport of patients of the armed forces will be accomplished by aircraft whenever air transport is available and aeromedical evacuation is feasible.

2. Responsibility

Responsibility for the aeromedical evacuation of patients of the United States armed forces is vested in the Department of the Air Force, except over routes of sole interest to the naval forces where requirements cannot be met by the facilities of the Air Force. Within a theater of operations, responsibility for combat zone aeromedical evacuation of United States armed forces casualties is divided between the Army and Air Force. Consistent with one of its primary functions, the troop carrier force will provide for the aeromedical evacuation of casualties from initial points of treatment or subsequent hospitalization within the combat zone to points outside of the combat zone. The Army, without infringement upon the functions of the Air Force, may employ organic aircraft to provide aeromedical evacuation airlift for battlefield pickup of casualties and their air transport to initial point of treatment and any subsequent move to hospital facilities within the combat zone. In airborne operations, the troop carrier force will provide for aeromedical evacuation of casualties from the objective area until ground linkup is attained.

The theater air commander is responsible for the establishment and operation of an aeromedical evacuation system for the theater. He delegates to the troop carrier force commander responsibility for control and operation of those aeromedical evacuation functions applicable to intratheater airlift operations that include specialized medical units, facilities, and personnel organic or assigned to the troop carrier force.

3. Functions of Troop Carrier Forces in Aeromedical Evacuation

Troop carrier forces control and operate the aircraft that provide airlift for intratheater aeromedical evacuation. Aircraft include fixed wing types capable of transporting many patients over long distances, and rotary wing aircraft capable of evacuating patients from the most inaccessible areas and from the roughest terrain. Troop carrier forces have assigned to them specialized aeromedical evacuation facilities and medical flight crews which provide the medical services required for care of casualties in transit. To obtain maximum utilization of troop carrier airlift for aeromedical evacuation within the short time allowed for aircraft on the ground during turnaround, casualty staging facilities are provided. These facilities receive evacuees from Army medical units in forward combat areas and furnish limited

medical care for evacuees awaiting airlift. Larger intransit aeromedical evacuation facilities are provided to operate in conjunction with air terminals. Intransit aeromedical evaluation facilities of theater aerial ports are not organic to the troop carrier force but are assigned by the theater air commander to the appropriate command operating the aerial port. The routine aeromedical evacuation task is accomplished with normal, organic troop carrier aircraft. Centralization of all airlift functions in one organization and the utilization of available aircraft for all airlift tasks is distinctly advantageous in accomplishing the theater mission. In order to have available an aeromedical airlift capability sufficiently flexible to adjust to needs which vary widely within the limits imposed by economic necessity, aeromedical evacuation must be centralized and integrated in the theater troop carrier forces.

4. Theater Aeromedical Evacuation System

To carry out Air Force responsibility for aeromedical evacuation in a theater of operations, an aeromedical evacuation system is established by the theater air commander to control the air movement of sick and injured personnel of the United States armed forces by airlift forces; to provide inflight medical care, intransit staging and embarkation and debarkation facilities for patients entering or en route via the aeromedical evacuation system on or in the vicinity of all air strips and air bases utilized by the Air Force. The aeromedical evacuation system is designed for maximum flexibility of operation and can extend its operations to the most forward echelon in the combat zone. Casualty staging facilities, organic to the troop carrier force, normally will be provided to support mobile Army surgical hospitals and evacuation hospitals and at other required locations in the combat zone. Responsibility for technical control and technical supervision of the aeromedical evacuation system is vested in the theater air surgeon.

5. Aeromedical Evacuation Control Center

a. The control element established by the troop carrier force commander to plan and monitor the airlift commitment includes an aeromedical evacuation control center integrated with the transport movement control center. Troop carrier force headquarters liaison officers from the aeromedical evacuation control center function for aeromedical evacuation as the airlift liaison coordinating officers do for other traffic. The aeromedical evacuation control center provides the facility through which technical supervision and operational control over all aeromedical evacuation units and personnel is exercised by the troop carrier commander. The control and liaison personnel of this section are obtained from the aeromedical evacuation unit. Patient movement control and transport movement control continually is monitoring the status of airlift flights through the media of regular reports by troop carrier units, air terminals, and aeromedical evacuation units. This insures maximum flexibility and efficiency and gears the system to changing requirements with minimum time loss. By studying the continuous display of airlift status information maintained in the control center, the troop carrier force commander is able to view the effectiveness of his operations, identify unnecessary lost motion, and take remedial action to maintain maximum force effectiveness.

b. The troop carrier command surgeon exercises control over all aeromedical evacuation activities within the air commander's area or responsibility in the theater. He appoints a senior medical administrative officer as aeromedical evacuation control officer. The aeromedical evacuation control officer, acting for the troop carrier command surgeon, exercises direct supervision over air evacuation activities by:

(1) Establishing an aeromedical evacuation control center, in conjunction with the transport movement control center, as a centralized agency to receive and process requests for aeromedical evacuation. Additionally, he assigns aeromedical evacuation missions to appropriate troop carrier aeromedical evacuation elements in the system.

(2) Establishing technical representation and liaison at all appropriate Army, Navy, and Air Force activities and agencies through the attachment of aeromedical evacuation liaison representatives. Specifically, qualified liaison representatives will be located at field army medical regulating sections where they may receive and process requests for air movement of casualties, inform the Army surgeon of airlift capabilities, and act as the direct representative of the troop carrier commander in matters pertaining to aeromedical evacuation.

(3) Maintaining communications between the various liaison representatives assigned in the field, and all casualty staging flights through the various communication facilities available, for rapid transmission of air movement requests and other information relating to aeromedical evacuation.

6. Aeromedical Evacuation Airlift Allocations

Component force commanders within a theater include their aeromedical evacuation requirements in their overall airlift needs to the Theater Air Transportation Board. The Theater Air Transportation Board takes cognizance of these aeromedical evacuation requirements in making their allocations of airlift to the component forces. The Theater Air Transportation Board in making overall allocations takes cognizance of aeromedical evacuation policies regarding relative priority of aeromedical evacuation as directed by the theater commander.

7. Return Airlift

Maximum utilization is made of the outbound airlift capability generated by inbound delivery of combat logistics to theater forces in planning and implementing aeromedical evacuation. Where outbound airlift is not adequate to meet theater aeromedical evacuation requirements, additional aircraft are made available on a priority basis for this necessary airlift. The air component commander will establish the priority classifications to accomplish the rapid and effective air movement of specific evacuees within the airlift percentage allocations made by the Theater Air Transportation Board. The medical officer making the air movement request will determine the air movement priority for specific evacuees.

Flights transporting medical evacuees normally will be designated specifically as aeromedical evacuation flights, and such flights will be moved ahead of other air traffic.

8. Aeromedical Evacuation Priorities

All aeromedical evacuation should be accomplished with a minimum of delay, however, as a matter of practical necessity some cases are more urgent than others. It thus becomes necessary to classify all aeromedical evacuees according to urgency of the requirement for their air movement. The senior medical officer of the medical facility which made the evacuation request will insure this priority classification. Normally, three classifications are employed:

a. *Urgent.* This classification will be used for emergency cases which must be moved immediately as a lifesaving measure, or when the tactical situation demands the immediate air movement of casualties from a specific location. "Urgent" casualty air movement requests will be processed and air movement accomplished ahead of other casualty air movements.

b. *Priority.* This classification applies to evacuees not requiring immediate aeromedical evacuation but who must be evacuated within a short period of time—normally, within 3 hours.

c. *Routine.* This classification will be used for evacuee air movement within 24 hours. Evacuees classified "Routine" normally will be transported by preplanned or scheduled troop carrier airlift.

U. S. GOVERNMENT PRINTING OFFICE: 1954